

## **REMARKS**

Claims 1, 4, 5, 7, 9, 12, 13, 15, 17, 25, 30, 36 and 39 have been amended. Claims 3, 11, 32 and 38 have been canceled. No claims have been added. Therefore, claims 1, 2, 4-10, 12-31, 33-37 and 39 remain pending in the application. Reconsideration is respectfully requested in view of the following remarks.

### **Section 102(e) Rejection:**

The Examiner rejected claims 1-3, 7-11, 14-16, 26-34, 36, 37 and 39 under 35 U.S.C. § 102(e) as being anticipated by Walker et al. (U.S. Publication 2006/0218098) (hereinafter "Walker"). Applicants traverse the rejection for at least the following reasons.

#### **Claim 1**

In regard to claim 1, Walker fails to teach or suggest an apparatus comprising, in part, a communications facility operable to communicate with a terminal, wherein the apparatus is operable to receive bill details for a transaction from the terminal through the communications facility, generate a transaction record from the bill details, and transmit the transaction record to the terminal through the communications facility. In rejecting claim 3, the Examiner cites FIG. 3, FIG. 4, and paragraphs [0054] and [0096] of Walker. However, FIGs. 3A and 3B fail to illustrate a communications facility operable to communicate with a terminal and transmit a transaction record generated from the received bill details to the terminal through the communications facility. Instead, as illustrated by cardholder 301 and block 361 of FIGs. 3A and 3B, Walker teaches that the cardholder transmits the single-use credit card number to the merchant. Clearly, a cardholder transmitting *a single-use credit card number* to a merchant is not the same as an apparatus transmitting *a transaction record generated from the received bill details* to a terminal through a communications facility.

Furthermore, FIG. 4, paragraph [0054] and paragraph [0096] describe the credit card transaction database *of the credit card issuer's central processor* and have nothing to do with the composition or functionality of Walker's hand-held smart card device. While Walker describes "a communication port 406 for communication with the merchant's central processor" (paragraph [0051], lines 6-7), the communication port is an element *of the credit card issuer's central processor*, not the hand-held smart card device. Clearly, the credit card issuer's central processor does not meet the specific limitations of claim 1 including being operable to transmit a transaction record to the terminal through the communications facility. Walker describes that each record of the credit card transaction database "corresponds to one transaction using the card" (paragraph [0096]). However, Walker fails to teach or suggest that the records of the transaction database are transmitted anywhere much less transmitted to a terminal through a communications facility as recited in claim 1.

Walker fails to teach or suggest, in the cited art or elsewhere, an apparatus as recited in claim 1 having a communications facility operable to communicate with a terminal much less the apparatus being operable to receive bill details for a transaction from the terminal through the communications facility, generate a transaction record from the bill details, and transmit the transaction record to the terminal through the communications facility. Thus, for at least the reasons presented above, the rejection of claim 1 is unsupported by the cited art and removal thereof is respectfully requested.

#### **Claim 4**

**In regard to claim 4, Walker fails to teach or suggest wherein the transaction record includes a digital signature that is generated using a cryptographic key contained within the non-volatile memory.** The Examiner asserts Walker teaches this limitation and cites paragraphs [0023], [0042], [0065] and [0066]. In the cited art, Walker teaches a cryptographic processor that creates single-use credit card numbers. Walker also teaches a pin number and a nonce. However, neither the pin number nor the

nonce is the same as a digital signature of a transaction record. More specifically, Walker's pin number is used to *provide access to the device* (see e.g., paragraph [0045], lines 5-7), not as a digital signature of a transaction record. Furthermore, Walker's nonce is not a digital signature of a transaction record as illustrated in paragraph [0060] reproduced below.

The central processor 101 then retrieves the account number from the device memory 104 (step 803). In step 804, the encrypted nonce C, the initialization variable IV, and account number A are concatenated to form an encrypted, single-use credit card number CCN:  $CCN = C\_IV\_A$ , where  $\_$  denotes concatenation.

In other words, Walker's nonce is encrypted and concatenated with an initialization variable and the account number to create a single-use credit card number. However, a *single-use credit card number* that includes an encrypted nonce is not the same as a *transaction record* that includes a digital signature that is generated using a cryptographic key contained within non-volatile memory.

Thus, for at least the reasons presented above, the rejection of claim 4 is unsupported by the cited art and removal thereof is respectfully requested. Claim 12 is considered in condition for allowance for at least reasons similar to those presented above in regard to claim 4.

### **Claim 7**

**In regard to claim 7, Walker fails to teach or suggest wherein said apparatus is operable to engage a first class of terminals external to the apparatus for making a transaction, and a second class of terminals external to the apparatus to enter or to update account information stored in the non-volatile memory.** The Examiner asserts Walker teaches an apparatus operable to engage a first class of terminals and a second class of terminals and cites FIG. 3, FIG 4, and paragraph [0093], which describe the interactions of the cardholder, merchant, and credit card issuer. However, no portion of the cited art teaches the specific limitations of claim 7 including an apparatus operable to engage a first class of terminals external to the apparatus for making a transaction, and

a second class of terminals external to the apparatus to enter or to update account information stored in the non-volatile memory.

Thus for at least the reasons presented above, the rejection of claim 7 is unsupported by the cited art and removal thereof is respectfully requested.

### **Claim 9**

**In regard to claim 9, Walker fails to teach or suggest a method for making a transaction with a device comprising, in part, for each of a plurality of transactions involving the same customer account, engaging a terminal, the device receiving bill details for the respective transaction from the terminal, the device generating a transaction record from the bill details, and the device transmitting the transaction record to the terminal.** The Examiner cites FIGs. 3 and 4 as well as paragraphs [0054] and [0096] of Walker. The cited art describes a credit card transaction database where each record of the “database corresponds to one transaction using the card, and includes the account number 501, the expiration date 507 of the card, the transaction amount 702, the merchant identification number 703 and an initialization variable 704” (paragraph [0054]). However, Walker fails to teach or suggest transmitting the records of the credit card transaction database anywhere much less to a terminal according to the specific limitations of claim 9. Walker is silent, in the cited art and elsewhere, in regard to a device receiving bill details for the transaction from the terminal, the device generating a transaction record from the bill details, and the device transmitting the transaction record to the terminal.

Thus, for at least the reasons presented above, the rejection of claim 9 is unsupported by the cited art and removal thereof is respectfully requested.

### Claim 15

In regard to claim 15, Walker fails to teach or suggest an apparatus for use in transactions including, in part, means for creating a respective transaction record for each of the plurality of transactions, wherein the respective transaction record comprises a digital signature that is generated using a cryptographic key. Walker teaches a cryptographic processor that creates single-use credit card numbers. Walker also teaches a pin number and a nonce. However, neither the pin number nor the nonce is the same as a digital signature of a transaction record. More specifically, Walker's pin number is used to provide access to the device (*see e.g.*, paragraph [0045], lines 5-7), not as a digital signature of a transaction record nor a digital signature that is generated using a cryptographic key contained within the non-volatile memory. Furthermore, Walker's nonce is not a digital signature of a transaction record as illustrated in paragraph [0060] reproduced above. Instead, Walker describes the nonce is encrypted and concatenated with an initialization variable and the account number to create a single-use credit card number. However, a *single-use credit card number* that includes an encrypted nonce is not the same as a *transaction record* that includes a digital signature that is generated using a cryptographic key.

Thus, for at least the reasons presented above, the rejection of claim 15 is unsupported by the cited art and removal thereof is respectfully requested.

### Claim 16

In regard to claim 16, Walker fails to teach an apparatus for use in making a transaction, including: non-volatile memory containing a set of multiple identifiers, wherein said multiple identifiers are also known to an agency associated with the transaction, and a processor operable to randomly or pseudo-randomly select one identifier from said set of multiple identifiers for use in any transaction. The Examiner cites FIG. 1 and paragraphs [0023], [0025], [0026], [0047] and [0049] of Walker. However, these citations fail to teach or suggest a processor operable to

**randomly or pseudo-randomly** select one identifier from said set of multiple identifiers for use in any transaction. While Walker describes various processors including processors 201 and 401 as well as cryptographic processors 205 and 405, Walker fails to describe that any of these processors are operable to **randomly or pseudo-randomly** select one identifier from said set of multiple identifiers for use in any transaction.

Thus, for at least the reasons above, the rejection of claim 16 is not supported by the cited art and removal thereof is respectfully requested.

#### **Claim 17**

**In regard to claim 17, Walker fails to teach or suggest a method comprising, in part, receiving a public key from the portable transaction device, receiving a transaction record comprising a digital signature from the portable transaction device, and decrypting and validating the digital signature with the public key.** Walker teaches a cryptographic processor that creates single-use credit card numbers. Walker also teaches a pin number and a nonce. However, neither the pin number nor the nonce is the same as a digital signature of a transaction record. More specifically, Walker's pin number is used to provide access to the device (*see e.g.*, paragraph [0045], lines 5-7), not as a digital signature of a transaction record. Furthermore, Walker's nonce is not a digital signature of a transaction record as illustrated in paragraph [0060] reproduced above. Instead, Walker describes the nonce is encrypted and concatenated with an initialization variable and the account number to create a single-use credit card number. However, a *single-use credit card number* that includes an encrypted nonce is not the same as a transaction record that includes a digital signature.

Thus, for at least the reasons above, the rejection of claim 17 is not supported by the cited art and removal thereof is respectfully requested.

## Claim 26

**In regard to claim 26, Walker fails to teach or suggest a method for performing a transaction at a terminal using a portable transaction device, comprising, in part, generating a bill for the transaction at the terminal.** The Examiner asserts Walker teaches this limitation and cites paragraphs [0045] reproduced below.

FIG. 3B shows the steps of the basic method of using the device in accordance with the present invention. To purchase goods or services in person, via telephone or via the Internet, cardholder 301 uses device 100 to generate a transaction-specific, single-use credit card number. The cardholder first inputs his PIN or biometric data to access the device (step 351). If access is granted, the device responds by querying the cardholder on display 102 whether it should generate a single-use credit card number (step 355). The cardholder responds by requesting generation of a credit card number (for example, by keying "YES"). He may optionally be asked to enter the amount of the purchase in step 356 or a merchant code number provided by the merchant. This number could be only a few digits long since it does not have to be unique to each merchant. (paragraph [0045], emphasis added)

The Examiner asserts that Walker teaches "...cardholder uses device to generate transaction specific data..." However, as clearly illustrated in paragraph [0045], the "transaction specific data" that Walker refers to is a single-use credit card number, not a bill for the transaction. Walker also describes that the cardholder may be asked to enter an amount of purchase or a merchant code number. Applicants assert that neither an amount of purchase nor a merchant code number is the same as a bill generated for a transaction. The Examiner also cites paragraph [0097]. However, paragraph [0097] describes generating an authorization code for a credit transaction. Clearly, an authorization code is not the same as a bill for a transaction.

**Furthermore, Walker fails to teach or suggest the method further comprising, in part, generating a transaction record on the transaction device, the transaction record incorporating information from the bill and the selected identifier, and transmitting the transaction record to the terminal.** The Examiner asserts Walker teaches these limitations and cites FIGs. 3 and 4 as well as paragraphs

[0045] and [0047]. FIG. 3A describes the interactions between a cardholder, a merchant, and a credit card issuer. FIG. 3A fails to describe anything about generating a transaction record according to the limitations of claim 26 and transmitting the transaction record to a terminal. While FIG. 3B and paragraphs [0045] – [0047] describe a device generates a *single-use credit card number* (see e.g., block 360), the cited art is silent in regard to generating a *transaction record* much less transmitting the transaction record to the terminal from which the a bill was received. As described above, while Walker describes a credit card transaction database (see e.g., paragraph [0096]) containing records corresponding to transactions, Walker fails to teach or suggest that these records are transmitted anywhere much less to the terminal according to claim 26.

Thus, for at least the reasons above, the rejection of claim 26 is not supported by the cited art and removal thereof is respectfully requested.

#### **Claim 27**

In regard to claim 27, Walker fails to teach or suggest wherein the transaction record includes a digital signature from the transaction device. The Examiner asserts Walker teaches these limitations and cites paragraphs [0023] and [0042] reproduced below.

According to another aspect of our invention, a device for facilitating credit transactions is provided which includes a processing unit including a cryptographic processor. The device also includes an input unit connected to the processing unit for inputting information thereto, and a display unit connected to the processing unit for displaying a processing result. In addition, the device includes a memory device connected to the processing unit. The memory device contains a private cryptographic key, a first data element, a second data element and a program adapted to be executed by the processing unit. In accordance with the program, the processing unit encrypts the first data element using the private cryptographic key and the second data element, modifies the second data element, combines the encrypted first data element and the second data element to generate a single-use financial account identifier, and displays the single-use financial account identifier using the display unit. (paragraph [0023], emphasis added)



FIG. 1 is a schematic diagram of a device 100 for generating a single-use credit card number in accordance with this invention. This device is preferably a smart card, hereinafter referred to as the "device." The device has a keypad 103, a display screen 102, a memory 104 and a central processor 101. Memory 104 contains a key 601, and CPU 101 contains a cryptographic processor. The device may be activated through the input of a unique cardholder identifier such as a personal identification number (PIN) through the keypad 103. Alternatively, the device may include a biometric interface 105, and be activated by the input of a suitable biometric record such as the cardholder's fingerprint. (paragraph [0042], emphasis added)

The cited art mentions nothing about a digital signature of transaction record. Paragraph [0023] describes actions performed to *generate a single-use financial account identifier*. However, *a single-use financial account identifier is not the same as* a transaction record including a digital signature. Paragraph [0042] describes that the device may be activated through the input of a unique cardholder identifier through a keypad, such as a PIN. Applicants assert *a PIN entered through a keypad to provide access to a device is not the same as a transaction record including a digital signature*. Walker fails to teach, in the cited art or elsewhere, that the transaction record includes a digital signature from the transaction device.

Thus, for at least the reasons above, the rejection of claim 27 is not supported by the cited art and removal thereof is respectfully requested.

### **Claim 29**

**In regard to claim 29, Walker fails to teach or suggest a method, comprising, in part, prior to transmitting the transaction record from the terminal to the agency computer, the terminal incorporates its own copy of the bill into the transaction record.** The Examiner cites paragraph [0045] and [0047]. Neither paragraph [0045] nor [0047] mention anything about the terminal incorporating its own copy of the bill into the transaction record. Instead, paragraphs [0045] – [0047] describe a device that generates a single-use credit card number and a cardholder that provides the single-use credit card

number to a merchant. Walker fails to mention anything, in the cited art or elsewhere, about the terminal incorporates its own copy of the bill into the transaction record.

Thus, for at least the reasons above, the rejection of claim 29 is not supported by the cited art and removal thereof is respectfully requested.

### **Claim 30**

**In regard to claim 30, Walker fails to teach or suggest receiving a request for a transaction on a customer account, wherein the request comprises a digital signature generated by a transaction device associated with the customer account, and verifying the digital signature.** Walker teaches a cryptographic processor that creates single-use credit card numbers. Walker also teaches a pin number and a nonce. However, neither the pin number nor the nonce is the same as a digital signature of a request for a transaction. More specifically, Walker's pin number is used to provide access to the device (*see e.g.*, paragraph [0045], lines 5-7), not as a digital signature of a request for a transaction. Furthermore, Walker's nonce is not a digital signature of a request for a transaction as illustrated in paragraph [0060] reproduced above. Instead, Walker describes the nonce is encrypted and concatenated with an initialization variable and the account number to create a single-use credit card number. However, a *single-use credit card number* that includes an encrypted nonce is not the same as a request for a transaction on a customer account that includes a digital signature.

Thus, for at least the reasons above, the rejection of claim 30 is not supported by the cited art and removal thereof is respectfully requested.

### **Claim 36**

**Walker fails to teach or suggest receiving a request for a transaction on a customer account, wherein the request comprises a digital signature generated by a transaction device associated with the customer account, and accessing the digital**

**signature within the request and using a cryptographic key to validate the digital signature.** Walker teaches a cryptographic processor that creates single-use credit card numbers. Walker also teaches a pin number and a nonce. However, neither the pin number nor the nonce is the same as a digital signature of a request for a transaction. More specifically, Walker's pin number is used to provide access to the device (*see e.g.*, paragraph [0045], lines 5-7), not as a digital signature of a request for a transaction. Furthermore, Walker's nonce is not a digital signature of a request for a transaction as illustrated in paragraph [0060] reproduced above. Instead, Walker describes the nonce is encrypted and concatenated with an initialization variable and the account number to create a single-use credit card number. However, a *single-use credit card number* that includes an encrypted nonce is not the same as a request for a transaction on a customer account that includes a digital signature. Since Walker fails to teach or suggest a request comprising a digital signature, Walker clearly fails to teach accessing the digital signature within the request and using a cryptographic key to validate the digital signature.

Thus, for at least the reasons above, the rejection of claim 36 is not supported by the cited art and removal thereof is respectfully requested.

### **Claim 39**

**Walker fails to teach or suggest a computer account system at an agency, said system comprising means for accessing a digital signature comprised within the received transaction request and validating the digital signature.** Walker teaches a cryptographic processor that creates single-use credit card numbers. Walker also teaches a pin number and a nonce. However, neither the pin number nor the nonce is the same as a digital signature of a received transaction request. More specifically, Walker's pin number is used to provide access to the device (*see e.g.*, paragraph [0045], lines 5-7), not as a digital signature of a transaction request. Furthermore, Walker's nonce is not a digital signature of a transaction request as illustrated in paragraph [0060] reproduced above. Instead, Walker describes the nonce is encrypted and concatenated with an initialization variable and the account number to create a single-use credit card number.

However, a *single-use credit card number* that includes an encrypted nonce is not the same as a *received transaction request* that includes a digital signature. Since Walker fails to even teach a transaction request including a digital signature, Walker clearly fails to teach accessing a digital signature within a transaction request and validating the digital signature.

Thus, for at least the reasons above, the rejection of claim 39 is not supported by the cited art and removal thereof is respectfully requested.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the rejection has been shown to be unsupported for the independent claims, a further discussion of the dependent claims is not necessary at this time.

#### **Section 103(a) Rejection:**

The Examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Walker, et al. (U.S. Publication 2006/02180980 (hereinafter “Walker”) in view of Mann, III et al. (U.S. Publication 2006/0122943) (hereinafter “Mann, III”), claim 8 as being unpatentable over Walker in view of Pitroda (U.S. Publication 2005/0247777), and claim 24 as being unpatentable over Walker in view of Wynn (U.S. Patent RE38,137 E). Applicants respectfully traverse these rejections for at least the following reasons.

#### **Claim 6**

**In regard to claim 6, Walker and Mann, taken singly or in combination, fail to teach or suggest wherein said apparatus is provided within inert packaging to allow implantation into the human body.** The Examiner asserts Walker fails to disclose this limitation. Therefore, the Examiner relies on Mann to disclose wherein said

apparatus is provided within inert packaging to allow implantation into the human body. The Examiner cites paragraphs [0042] and [0051] reproduced below.

Further, it should be appreciated that selection of an alias and a personal identification entry may not involve simply the selection of alphanumerics. That is, an account-holder may choose to select an alternative type of alias or personal identification entry. For example, such alternative types may include fingerprint recognition, gene identification, DNA identification, use of biometrics, i.e., using biological parameters of a person, retina identification, or voice recognition, for example. (paragraph [0042], emphasis added)

As described above, the alias and PIE may utilize numbers, such as for example a telephone number. However, the method of the invention is not limited to use of numbers. That is, any of numbers, alphanumerics, names, phrases, or combinations of numbers, alphanumerics, names or phrases, for example, might be utilized for either the alias or the PIE. Also, alternative techniques of identification might be utilized for either the alias or the PIE, such as human characteristics. These further forms of identification might include fingerprint recognition, gene identification, DNA identification, use of biometrics, i.e., using biological parameters of a person, retina identification, or voice recognition, for example. (paragraph [0051], emphasis added)

Mann teaches methods of personal identification including alphanumerics and other techniques of identification. However, Mann is silent in regard to an apparatus provided within inert packaging to allow implantation into the human body. Neither Mann nor Walker, taken singly or in combination, teach or suggest the specific limitations of claim 6.

**Furthermore, Applicant asserts the Examiner has failed to provide a proper reason to combine the teachings of Walker with the teachings of Mann. The Examiner asserts:**

Accordingly it would have been obvious to one of ordinary skill in the art at the time of applicants invention to modify the method of Walker et al and incorporate the apparatus, wherein said apparatus is provided within inert packaging to allow implantation into the human body as taught by Mann, III et al in order to ensure adequate security.

However, Walker clearly describes security features in paragraph [0021]:

This invention provides a method and a device to facilitate secure electronic commerce, secure remote credit card purchases, and secure conventional credit card purchases wherein the customer is assured that the merchant or an intercepting third party cannot misuse any credit card information. (paragraph [0021], emphasis added)

Thus, one seeking to “ensure adequate security” would simply use the system of Walker and not be motivated to combine Walker’s teaching with any other reference. Furthermore, even were the teachings of Walker and Mann combined, the combination would not result in an apparatus according to the specific limitations of claim 6. More specifically, neither Walker nor Mann, taken singly or in combination, teach or suggest an apparatus provided within inert packaging to allow implantation into the human body.

Thus, for at least the reasons presented above, the rejection of claim 6 is unsupported by the cited art and removal thereof is respectfully requested.

Applicant also asserts that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the rejections have been shown to be unsupported for the independent claims, a further discussion of the dependent claims is not necessary at this time.

## CONCLUSION

Applicant respectfully submits that the application is in condition for allowance, and prompt notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzl, P.C. Deposit Account No. 501505/5681-20500/RCK.

Respectfully submitted,

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